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Recent Engineering Graduates Out-Earn Their Science Counterparts

by John Tsapogas

In 1995, full-time employed recent college graduates with bachelor's degrees in engineering earned 46 percent more than graduates with bachelor's degrees in science fields.

In 1995, the median annual salary for recent (July 1992-June 1994) engineering graduates was $33,500 for those with a bachelor's degree in engineering and $44,000 for those with a master's degree in engineering (table 1). These salaries are 46 percent and 26 percent higher than salaries for recent bachelor's ($22,900) and master's

Table 1. Number, employment status, and median salary of 1993 and 1994 bachelor's and master's degree recipients, by field of degree: 1995

Degree and field	Graduates 1993 and 1994[2] (thousands)	Education and employment status: April 1995				Median salary, FT employed graduates[3]
		Full-time students	Not full-time student			
			Empl'd in Science or Engineering	Empl'd in other occupations	Not employed and not FT student	
			(Percentage distribution)			
			Bachelor's degree recipients			
Sciences and engineering	700.1	23	19	52	6	$25,000
All sciences	581.7	25	10	59	6	22,900
Computer & mathematical sciences	69.2	13	32	51	4	30,000
Life and related sciences	121.6	37	10	47	5	22,000
Physical and related sciences	33.2	39	27	30	4	25,000
Social and related sciences	357.8	21	5	67	7	21,000
All engineering	118.4	15	62	20	4	33,500
Aerospace and related engineering	4.4	25	43	29	3	30,000
Chemical engineering	9.6	22	58	14	6	37,800
Civil and architectural engineering	18.0	13	68	17	3	30,000
Electrical, electronics, computer, and communications engineering	38.6	12	64	21	4	35,000
Industrial engineering	6.4	10	59	28	3	34,000
Mechanical engineering	28.9	13	66	17	4	34,000
Other engineering	12.5	25	50	21	3	32,000
			Master's degree recipients			
Sciences and engineering	146.3	24	43	28	5	39,000
All sciences	99.7	26	32	36	5	35,000
Computer & mathematical sciences	24.3	14	54	28	4	43,200
Life and related sciences	15.0	36	30	29	5	31,200
Physical and related sciences	9.7	39	41	16	5	35,000
Social and related sciences	50.7	27	21	46	6	30,000
All engineering	46.6	19	65	11	4	44,000
Aerospace and related engineering	1.7	28	56	14	2	43,600
Chemical engineering	1.8	25	67	5	3	44,000
Civil and architectural engineering	6.1	13	77	7	3	39,500
Electrical, electronics, computer, and communications engineering	16.4	21	65	9	5	46,000
Industrial engineering	3.0	9	66	23	2	44,000
Mechanical engineering	7.4	20	67	9	3	43,000
Other engineering	10.1	20	59	16	5	45,000

[1] For graduates with more than one eligible degree at the same level (bachelors/masters), the most recent degree at that level was used.

[2] Includes people who received a bachelor's or master's degree in science or engineering from a U.S. college or university from July 1992 through June 1994.

[3] Salary for self-employed and full-time students is not included in data presented in table. Median salaries are rounded to the nearest hundred dollars.

NOTE: Details may not sum to totals because of rounding. Percentages were calculated on unrounded data.

SOURCE: NSF/SRS, National Survey of Recent College Graduates, 1995

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($35,000) degree recipients, respectively, in science fields.

Salary figures and employment status data for recent science and engineering (S&E) graduates are derived from the National Survey of Recent College Graduates, a survey conducted biennially by the National Science Foundation. The survey was conducted in 1995 and covers about 700,000 persons who received a bachelor's and/or master's degree from July 1992 through June 1994.

About one-fourth of the 1993 and 1994 S&E bachelor's and master's graduates were enrolled in graduate school on a full-time basis in 1995. Students who had majored in the physical and related sciences and the life and related sciences were more likely to be in graduate school as full-time students than were graduates with degrees in computer and mathematical sciences or engineering (table 1).

Success in the job market varies significantly by level and field of degree. One measure of success is the likelihood of finding employment directly related to a graduate's field of study. Approximately one-half of all master's degree recipients, but only a fifth of all bachelor's graduates, were employed in their field of study in 1995. Among both master's and bachelor's degree recipients, students who had received their degrees in either engineering or computer science were more likely to be working in their field of study than degree recipients in other S&E fields, whereas students majoring in the social sciences were less likely than their counterparts in other S&E fields to have jobs directly related to their degrees.

The private for-profit sector is by far the largest employer of recent bachelor's and master's S&E degree recipients. In 1995, 59 percent of bachelor's degree recipients and 47 percent of master's degree recipients were employed in a private, for-profit company (table 2). The academic sector has been the second largest employer of recent S&E graduates. Master's degree recipients were more likely to be employed in 4-year colleges and universities (23 percent) than were bachelor's degree recipients

Table 2. Percentage of employed 1993 and 1994 science and engineering bachelor's and master's degree recipients, by sector of employment and field of degree: 1995

Degree and field[1]	Total employed (thousands)	Sector of employment[2]						
		Educational		Non-educational institutions				
		4-yr college & university	Other educational institutions	Private for-profit company	Self-empl'd	Nonprofit organization	Federal Gov't	State or local gov't
		(Percentage distribution)						
Bachelor's recipients:								
Science & engineering....	585.6	10	12	58	3	6	4	6
All sciences..................	476.7	10	14	55	3	7	4	7
All engineering............	108.9	9	3	74	2	1	7	4
Master's recipients:								
Science & engineering....	128.4	19	13	46	3	6	7	6
All sciences..................	86.0	21	18	37	3	9	5	7
All engineering............	42.4	15	3	65	2	1	10	4

[1] For graduates with more than one eligible degree at the same level (bachelors/masters) the most recent degree at that level was used.

[2] This is the sector of employment in which the respondent was working on his or her primary job held on April 15, 1995. In this categorization, those working in 4-year colleges and universities or university-affiliated medical schools or research organizations were classified as employed in the "4-year college and university" sector. Those working in elementary, middle, secondary, or 2-year colleges or other educational institutions were categorized in the group "other educational." Those reporting that they were self-employed but in an incorporated business were classified in the private, for-profit sector.

NOTE: Details may not sum to totals because of rounding. Percentages were calculated on unrounded data.

SOURCE: NSF/SRS, National Survey of Recent College Graduates, 1995

(13 percent). The Federal sector employed only 7 percent of S&E master's degree recipients and 4 percent of S&E bachelor's degree recipients in 1995. Engineering graduates are more likely to find employment in the Federal sector than science graduates. Other sectors employing small numbers of recent S&E graduates include educational institutions other than 4-year colleges and universities, non-profit organizations, and State or local government agencies.

Another measure of job market success is the likelihood of finding a career path job.[1] As expected, S&E master's degree recipients were more likely than S&E bachelor's degree recipients to find a career path job. Approximately, two-thirds of all master's degree recipients and one-half of all bachelor's degree recipients found a career path job. Graduates with degrees in computer and mathematical sciences or engineering were more likely to find career path jobs than graduates with degrees in other fields. Three-fifths of bachelor's degree graduates in computer and mathematical sciences and engineering indicated that they had found career path jobs. Almost four-fifths of all master's graduates with degrees in computer and mathematical sciences and engineering found career path jobs.

This Data Brief was prepared by John Tsapogas who may be reached at the following address:

Division of Science Resources Studies
National Science Foundation
4201 Wilson Boulevard, Suite 965
Arlington, VA 22230

For free printed copies of SRS Data Briefs, write to the above address, call 703-306-1773, or send e-mail to pubs@nsf.gov.

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[1] A "career path" job is identified by the survey respondents as a job that will help graduates in their future career plans or a job in a field in which graduates want to make a career.

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